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The Effect of ACA Medicaid Expansion on People's Retirement Decision

by

Bill Christopher

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of the requirements for
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Abstract

As of January 2018, thirty-three states have adopted the Affordable Care Act (ACA) Medicaid expansion. There is an emerging literature to study the effects of ACA Medicaid expansion on various outcomes, such as insurance coverage, health status, and labor supply. For example, a study from the Congressional Budget Office projects that the U.S. labor supply will decrease 1.5-2% from 2017 to 2024 because of this expansion. In a recent paper, Ayyagari (2017) argues that because employer sponsored retiree benefits are declining and Medicaid coverage is expanding, retirement age will decrease by 3.6 to 7.2 months. In this paper, I use data obtained from the Current Population Survey (CPS) from 2005 to 2017 to estimate the effect of Medicaid expansion in certain states on the decision to retire early through a difference-in-difference regression. The hypothesis is that the Medicaid expansion through ACA has given people a new incentive to retire earlier, therefore decreasing the labor force. I examine several outcomes, including employment, labor force participation, retirement, and part-time work. The results indicate that states that expanded Medicaid in 2014 increased the likelihood of an individual being employed and participating in the labor force, and decreased the likelihood of doing part time work or retiring. My result contradicts CBO's expectation.

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Chapter 1. Introduction

The Affordable Care Act's Medicaid expansion has created an incentive to retire early (Ayyagari 2017). Once tasked with the problems of paying for their medical bills, these people would have to keep working to keep up with their medical bills, then once they hit 65, Medicare would cover their health insurance. Now that Medicaid covers them, they have a new incentive to retire because they do not have to work to pay for these medical bills. Some argue it has enabled workers to work past what age they could have worked before (Frisvold and Jung 2016). Up until 2018, over half of the states in the United States have opted to expand Medicaid to adults above 138% of the poverty level.

This paper studies the effect that the ACA Medicaid expansion has on retirement. The topic is getting more attention in this field of research. I hypothesize that this Medicaid expansion is negatively impacting the labor supply of the country. There are many possible effects that the ACA Medicaid Expansion can have on retirement. The first possibility is that the increase in health insurance coverage will create a new incentive for people to retire early and diminish the labor force. The availability of health insurance with Medicaid before adults turn 65 years old has allowed people to leave the workforce early with no consequences of losing their employer provided health insurance. From the Health Retirement Survey, employers with a large number of employees (greater than 200) that give out retiree benefits has decreased from 66% in 1988 to 23% in 2015. The steep decline in these benefits, along with ever rising costs of healthcare and medical treatment has caused older workers to get into job lock, where they only continue working because they have employer health insurance. With the new ACA, people will opt out of working for retirement because of the Medicaid expansion and the lower premiums on the insurance market. This decrease in the labor force could negatively impact the lower income

citizens in the U.S. A decrease in the labor supply could drive up the wage rate, making it harder for workers with less education to get hired, because companies do not want to pay these individuals a higher wage.

The Affordable Care Act has turned health insurance into less of a problem for a lot of Americans. The expansion of Medicaid in 2010 has made things easier for those with a low income. Health insurance is more affordable, and some people qualify for assistance that covers tax credits or subsidies, while others can get health insurance for an affordable price in their state's exchange program.

On the other hand, the increase in coverage can cause people to have better health status so they are able to stay at their jobs for longer, increasing career duration. Single childless males are the ones most impacted by the expansion. Single mothers were already covered by Medicaid before expansion and now single childless males are the ones now being covered by the government as well. Single childless males may work more hours once they are taken better care by Medicaid.

This paper uses the Current Population Survey to look at whether ACA Medicaid expansion increases the incentive for older people to retire early. A difference-in-difference method is used, controlling for age, sex, race, education, etc. The results of the regression show no increase in retirement due to the expansion, but employment and labor force participation are increased. The policy implications of the findings of the paper are difficult to interpret since the expansion occurred quite recently in 2014. Since no significant effect was found on retirement and employment and labor force participation was increased through ACA Medicaid expansion, then perhaps the U.S. might think about expanding Medicaid even further to 150% of FPL, and making it mandatory in all states. This paper gives us a deeper insight on the effect of ACA

Medicaid expansion over the past 3 years and can be expanded upon in the future with data from future years.

Chapter 2. Background of Medicaid & ACA Medicaid Expansion

A. History

Medicaid is a Federal and State joint program that was established in 1965 to provide health care for low income individuals. Since it is a joint program, Medicaid varies over the 50 states and the District of Columbia. The Federal government sets a minimum and maximum income eligibility, and the state chooses where the eligibility ends. In 2010, the Affordable Care Act allowed for a large Medicaid expansion across the U.S., from 2010 to 2013, only 4 states chose to expand. In January 2014, the expansion was heightened so that states could cover individuals under the age of 65 in families with income under 138% of the Federal Poverty Level. Following that change, 21 states expanded.

B. Coverage

In all states, Medicaid covers some low-income people, low income single mothers with children or who are pregnant, the elderly, and those with disabilities. In expansion states, Medicaid covers children through age 18 in families with income below 138% of the FPL, pregnant women with income below 138% of FPL, parents who receive cash assistance because of low income, and seniors and disabled who receive cash assistance from Supplemental Security Income (SSI). A big part of the expansion was that people were not denied coverage due to their previous health status. The following was reported from the Centers for Medicare and Medicaid Services, in 2014, 129 million Americans no longer had to worry about being denied coverage due to pre-existing conditions, this includes 17 million children that otherwise would have been denied. 105 million Americans did not have to worry about being cut off from Medicaid because the expansion did away with a lifetime limit of care, helping these people stay in coverage even though they would have been across the threshold of assisted care. 3 million young Americans

stayed on their parents plan when they would have been uninsured if the expansion did not occur. This data provided by CMS shows that the coverage increase due to expansion is vast and is helping the overall health state of American citizens.

C. State Choices on Medicaid Expansion

ACA Medicaid expansion is a state choice, and not all states have to expand. A state will expand if they believe it is economically viable for them and it also depends on how generous their state legislature is. Generally, states with Democratic State Legislature have more generous policies compared to Republican states. In January 2014, 21 states chose to expand Medicaid through ACA, these are the treatment group in the regression. 19 states still have not opted to expand Medicaid, these are the control group in the regression. Table 1 includes 4 columns showing when and if each state decided to expand Medicaid. Column 1 includes the states that expanded between March of 2010 and December of 2013, (California, Connecticut, Washington D.C., and Minnesota), these states are dropped. Column 2 includes the 21 states that expanded in January 2014, these are the treatment group states. Column 3 states expanded between January 2014 and December 2016, (Michigan, New Hampshire, Pennsylvania, Indiana, Alaska, Montana, and Louisiana), these states are dropped. Column 4 is the control groups, the 19 states that did not expand Medicaid by January of 2017.

Chapter 3. Literature Review

A. Health Insurance and Early Retirement

The availability of Health Insurance, and its effect on retirement is debated in the following literature. (Ayyagari 2017; Shoven and Slavov 2014; Moehrle 2013; Levy et al 2015; Uccello 1998; Fields and Mitchell 1982; Garthwaite et al 2014; Gustman et al 2016; Frisvold and Young 2016). These have mixed results on whether the Medicaid expansion has affected the labor supply.

In a recent article, Ayyagari (2017), states that offering employer sponsored benefits for retirees is declining, and almost 10 percent of workers that do not have employer sponsored benefits but are covered by the ACA will retire by 62. This paper uses a differences-in-differences method that compares workers with employee retiree benefits to employees without employer sponsored benefits prior to and after the ACA. It shows that workers have more of an idea of when they are going to retire, causing the average retirement age lowering by 3.6 to 7.2 months.

The role of employer sponsored retiree health insurance is discussed in Shoven and Slavov (2014), specifically about the public-sector employee's decision to retire. Since most government employees get retiree health insurance coverage, they have an incentive to retire early. The paper is an empirical study to see whether retiree health insurance is correlated with a full-time work exit for public sector employees with over 5 years of tenure at a pre-Medicare eligible age. Their model includes data from HRS with controls of demographics, health, job description, work history, income, and pension plan, which makes for a well-rounded empirical model with many extraneous factors considered. The results of their model show that 38% of workers aged 55-59 will stop full time work over a two-year period and 26% of workers aged 60-64 will stop full time work if they have access to retiree health insurance. Many of the 55-59 workers that stopped full time

transitioned into part time roles which is not the case for the 60-64 group. These results are consistent with the idea that when someone has retiree insurance, they have an incentive to retire early if they have enough money saved up.

Moehrle (2013) reviews the book Weller, Wenger, and Gould (2004) that addresses the erosion of retiree income security. The book shows the dramatic increase in the costs of medical care and its effects on retirees who do not have employer coverage. Moehrle (2013) states that both those that retired early and those that retired after 65 have declining income security but that this conclusion rests solely on the declining occurrence of private insurance coverage. Since this study was done in 2004, the data shows people trying to work longer and retire later before ACA was enacted. With per capita health expenditure rising at a higher rate than the national income, people are more likely to stay employed because of this lack of security. Moehrle (2013) criticizes that Weller, Wegner, and Gould (2004) do not include any cross-tabulation calculations with health status, education, and income, all of which could have significant effects on one's decision to retire. This relates to my research as I look at many determinants of the decision to retire.

Looking at the ACA expansion, Levy, Buchmueller, and Nikpay (2015) find that there was no increase in retirement from the 2014 ACA Medicaid expansion. They used data from the Current Population Survey to see if there was an increase in retirement and a shift to part time work in workers aged 55-64 in the 18 months after the 2014 Medicaid expansion. The paper cites a report from Congressional Budget Office (2014) which projects that the ACA expansion will greatly reduce the labor supply, reducing hours worked by 1.5-2% or 2-2.5 million workers, from 2017 to 2024. The paper does not find any evidence to support the fact mentioned in CBO, instead leaning towards a decrease in labor demand to explain the decrease in workers. This decrease in demand could be attributed to the increase in technology and lowered demand for physical workers.

Examining how people work after the early retirement age (62) and normal retirement age (65) compared to those who retire before those landmarks, Uccello (1998) focuses on the factors of health status, income, employment characteristics, and other demographics to see when workers retire. Uccello uses the SIPP and HRS data with a multivariate logit model to make her calculations. She concludes that most workers, including those past the age of normal retirement, are in good health. A minority of the retired workers are unable to work due to conditions that make continued labor extremely difficult. The other finding is that those who are unmarried and retire early have much lower wealth than other workers, making life hard for them if Medicaid does not cover them for their early retirement.

An article that examines how earnings, social security, and pension affect the decision of when to retire show earnings as the most important factor. Fields and Mitchell (1982) used data from a 1978 U.S. Department of Labor Survey on retirement benefits, this was merged with employer data on earnings history and basic demographics to allow the authors to run an empirical model to calculate determinants of retirement. The results of the study are that those workers who stand to gain increasing income will not retire. This helps support the claim that workers will work longer if they have no incentive to retire earlier, as this data is before the Medicaid expansion.

Using the CPS data for Tennessee, Garthwaite et al (2014), find that public health insurance eligibility affects labor supply. When their labor supply decrease estimation is applied, they estimate that anywhere from 500,000 to 1 million individuals who are childless adults, will exit the labor supply in response to being eligible for free or discounted health insurance. These findings hold true to the idea that Medicaid expansion will give these impoverished workers an incentive to retire early.

To find the missing effect on retirement of the Affordable Care Act, Gustman, Steinmeier, and Tabatabai (2016) use a difference-in-difference analysis with the HRS data to analyze those whose retirement incentives are affected by ACA and those that are not. The authors believe that the recent contradictory literature cannot come to a clear conclusion on what effects the ACA has on retirement. This paper uses three control groups, one with employer health insurance while working but not covered if they retire before 65, the second which has employer sponsored healthcare before and after retirement, and the third does not have employer health insurance while working or after retirement. The authors believe that the first group is given the same incentive from ACA that the workers that have employer retiree insurance have that would make them more likely to retire early. Their findings showed that those who had health coverage while working but the employer did not give them retiree insurance would increase their early retirement by a slight amount. The group who did not have employer health insurance before or after retirement showed a reduced probability of early retirement. This could be attributed to the fact that even when they were working and they had no health insurance, they could not afford their medical bills and therefore they had to stop working. With the Medicaid expansion, they can afford the health care they need and can continue to work.

Discussing the expansion of Medicaid, Frisvold and Jung (2016), investigate whether the number of people who are uninsured is reduced, and the labor force is reduced as well. The authors use CPS data to compare changes in insurance coverage and labor market outcomes in states that expanded Medicaid versus those that did not. They found that coverage was increased significantly but labor markets were not affected. This evidence goes against the idea that the Medicaid expansion is reducing the labor supply.

B. Various Effects of Medicaid Expansion through ACA

Understanding the Medicaid expansion is crucial to be able to understand its effects on retirement. The Medicaid expansion has many effects, and the following literature explains how it is not just a one-dimensional program. It will have many other effects on the U.S. population in the states that have decided to expand said program.

A background article on Medicaid and its various effects on the U.S., Antonisse et al (2017) states many effects of the Medicaid expansion and the good it has done for the nation over the past 4 years. It is a study done by the Kaiser Family Foundation that states the Medicaid expansion has increased coverage and lowered the uninsured rates, especially in the low-income population sector. Self-reported health among low income individuals has also increased with more affordability and access to care. Studies have shown that rural and urban areas in states that expanded Medicaid have a much greater coverage rate than those who did not expand. This article even had studies that employment and the labor market also increased because of the health benefits that the ACA created. With more people having access to health care, they can identify and treat chronic conditions that might have otherwise kept them out of the workplace. Economic benefits for states and providers have also increased says Antonisse et al (2017).

As Antonisse et al (2017) discusses the overall effects of Medicaid, there are many effects beyond early retirement that should be considered when discussing its impact. The enrollment growth of Medicaid has shown drastic increase in states that have decided to expand, particularly in individuals who were not previously eligible, but also in those who were already eligible but not enrolled. Non-expanded states have smaller enrollment growth, (Miller and Wherry (2017), Hoadley et al (2017), Decker et al (2017), Barker et al (2017)). The gap between expansion states and non-expansion states has also dramatically widened since 2014, (Sommers et al

(2017), Decker et al (2017), Miller and Wherry (2017)). Certain sections of the population that needed the coverage the most has been increased in expanded states, prescription drug users, people with HIV, veterans, parents, mothers, low-income workers, and childless adults, (Kates and Dawson (2017), Haley et al (2017), McMorrow et al (2017)). Some people do not fully understand how the expansion works and have been dis-enrolled due to non-payment. People need to be better educated on how Medicaid operates so that coverage can continue to expand and help these people that need the health insurance. (Musumeci et al (2017)).

Medicaid expansion also helps fight some of the most troubling problems in our country, one being opioid abuse, (Clemens-Cope et al (2017), Wen et al (2017)). Two studies also found that Medicaid expansion helped decrease the length of stay for Medicaid patients, (Pickens et al (2017), Holzmacher et al (2017)). The Economic benefits are also great for states that chose to expand. Budget savings have increased, revenue is increasing, and overall economic growth has occurred, (Grady et al (2017), Reynis (2016), Sommers and Gruber (2017)).

An overview of Medicaid and its effects on various aspects of the U.S., Bitler and Zavodny (2014) discuss those effects being welfare, labor supply, marriage, birth rates, savings, coverage, crowding out, and health. While focusing on labor supply they do not find much concrete evidence on the Medicaid expansion of 2010 affecting the labor supply, stating that it reduces job lock primarily in unmarried women, with very few other effects.

Chapter 4. Data

A. Current Population Survey (CPS)

I collected data from the Current Population Survey (CPS), which is a nationally representative survey cosponsored by the U.S. Bureau of Labor Statistics to provide information on the nation's labor force. The state level of unemployment was gathered from the Bureau of Labor statistics separated by year. The survey asks questions about the staples of our lives, (work, education, and earnings), as well as other supplemental topics like child support, health insurance coverage, school enrollment, and other social well-being questions. CPS is cross sectional data that focuses on individual employment, given monthly to around 60,000 households in the United States. It is published monthly, quarterly, and annually to give out information on the society and its employment status at different points throughout the year. The survey is conducted through live telephone and in person interviews with household respondents. People eligible to be interviewed are the civilian non-institutional population ages 16 and up throughout the 50 states and Washington D.C, individuals excluded from the survey are those currently on active duty in the military and those who are in prison or long term care facilities. The results of the survey are used generally for economic research and public policy planning from the government. There are supplemental parts of the survey that give surveyors from the Bureau of Labor Statistics a more in depth view on employment through displacement and tenure etc.

In this paper, I use the Annual Social and Economic Supplement of the Current Population Survey during the period between 2005 and 2017. There are 123,549 observations in my data, restricted to 40 states, it is from the March Annual ASEC survey. The level of data is individual with many characteristics being applied to each individual based on many of the independent and

dependent variables. The age was limited to those below 65 and above 54, the education level was everyone who did not finish a full 4-year college, the race is sorted into white, black, and other. Part time workers are those who work less than 40 hours a week and those who did not report education or sex are dropped in these regressions. Two variables that are generated are the treat*after variable that represents the interaction of a treatment state and post Medicaid expansion, and female*married which represents the interaction of one being both female and married.

Table 2 Panel A presents summary statistics for the independent variables, there are 61,842 observations in the treatment states and 61,707 observations in the control states. In the treatment states, the people's average age in this sample is 59 and 53% of the sample are females. 78% of the sample is white people, 11% is African American, and the other 11% is other races such as Asian or Hispanic. 68% of people are married and 93% are citizens in the treatment states. The sample is divided into 3 education levels, 46% have completed high school, 40% have completed some college or a 2-year college, and 14% have not completed high school as those who received their bachelor's degree are not included in this sample. In the control states, the peoples average age is 59 and 53% are females. 79% of the sample is white people, 16% is African American, and the other 5% is other races such as Asian or Hispanic. 69% of people are married and 95% are citizens in the treatment states. The sample is divided into 3 education levels, 45% have completed high school, 41% have completed some college or a 2-year college, and 14% have not completed high school.

Table 2 Panel B presents summary statistics of the dependent variables. In the control states, 67% of people are employed, 71% of people participate in the labor force, 22% of the people work part time, and 21% of the people are retired. In the treatment states, 67% of people are

employed, 71% of people participate in the labor force, 25% of the people work part time, and 21% of the people are retired. There is little variance between the descriptive statistics of the control and treatment states, showing similar groups that would not skew results because of original differences.

Chapter 5. Empirical Method

In this study, I use a differences-in-differences method to explore the effect of ACA Medicaid expansion on people's labor supply and retirement decisions. Difference-in-difference method is an econometric method that compares the effects of variables on treatment and control groups over time. This method uses cross-sectional data to estimate the differences between the treatment and control groups over time, and their effect on the dependent variable. There has to be a point that divides two sections of time, creating a before and after, in this study it will be January 2014 when many states chose to expand Medicaid through the ACA expansion.

The following models are estimated using OLS.

Model Statement

$$EMPLOYED = \beta_0 + \beta_1 TREAT + \beta_2 AFTER + \beta_3 TREAT * AFTER + \beta_4 X + \varepsilon$$

$$LFP = \beta_0 + \beta_1 TREAT + \beta_2 AFTER + \beta_3 TREAT * AFTER + \beta_4 X + \varepsilon$$

$$PARTTIME = \beta_0 + \beta_1 TREAT + \beta_2 AFTER + \beta_3 TREAT * AFTER + \beta_4 X + \varepsilon$$

$$RETIRED = \beta_0 + \beta_1 TREAT + \beta_2 AFTER + \beta_3 TREAT * AFTER + \beta_4 X + \varepsilon$$

Dependent Variable

EMPLOYED	Dummy Variable: 1 if employed, 0 if not
LFP	Dummy Variable 1 if part of labor force, 0 if not
PARTTIME	Dummy Variable: 1 if working part time, 0 if not
RETIRED	Dummy Variable: 1 if retired, 0 if not

Key Independent Variables

TREAT	Dummy Variable: 1 if the state expanded Medicaid in 2014, 0 if not
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AFTER Dummy Variable: 1 if the year of the data is after 2014, 0 if not

Other Independent Variables (X)

AGE Numerical Value of Person's Age

SEX Dummy variable: 1 for Female, 0 for Male

RACE Dummy Variables:

 BLACK Dummy variable that indicates whether the individual is black.

 OTHER Dummy variable that indicates that the individual is neither white
or African American.

EDUC 3 Dummy variables: SOME_HIGHSCHOOL- Indicates the person
has not finished high school, HIGHSCHOOL- Indicates the person
finished high school, SOME_COLLEGE- Indicates the person has
completed some but not all of college

MARRIED Dummy Variable: 1 if married, 0 if unmarried

STATEUNEMP Numerical Value: State Unemployment Level

CITIZEN Dummy Variable: 1 if citizen, 0 if not

INSURANCE Dummy Variable: 1 if insured last year, 0 if not

Interaction Variable- The interaction between these two dummy variables will be the term that captures the effect of Medicaid expansion on labor supply. Expansion decision by state is shown below in Table 1.

The Key Coefficient in this equation is β_3 , and if significant, it will show that the expansion of Medicaid in those expansion states has a significant effect on whether a person will retire. It is

shown from a previous study, (Shoven and Slavov (2014)), that workers in government have an incentive to retire early so given this similar incentive, the β_3 coefficient should be significant.

Chapter 6. Results

Table 3 presents our baseline results on various outcomes. We start to estimate the ACA Medicaid expansion on people's employment decision, and the results are shown in Column (1). As we can see, Medicaid expansion significantly increases the likelihood of being employed among low-educated people (have less than a bachelor's degree) aged 55-64, by 1.26 percentage points. Individuals from states that expanded Medicaid are less likely to be employed than those from states that haven't expanded, and respondents are more likely to be employed after 2014. Females are 10.2 percentage points less likely to be employed than males, and married individuals are less likely to be employed than single people. The older a person is by 1 year, the likelihood of him being employed is decreased by 3.73 percentage points. Compared to White people, African Americans are 3.34 percentage points less likely to be employed, and all other races are less likely to be employed as well. Compared to those who did not complete high school, those who completed high school are 8.28 percentage points more likely to be employed, and those who completed high school and some college are 12 percentage points more likely to be employed. Citizens of the United States increases the likelihood of being employed by 1.64 percentage points.

In Column 2, the ACA Medicaid expansion has very similar effect on labor force participation as it does for employment, but to varying degrees. The results on the likelihood of doing part-time jobs are presented in Column 3. The ACA Medicaid expansion significantly decreases the likelihood of a low educated individual aged 55-64 switching to part time work by 2.27 percentage points. Individuals from treatment states are more likely to switch to part time work than those from control states and respondents are more likely to switch to part time work after 2014. Females are 19.7 percentage points more likely to switch to part time work than

males, and married individuals are more likely to switch to part time work compared to single people. The older a person is by 1 year, the likelihood of them switching to part time work increases by 1.41 percentage points. Compared to white people, African Americans are less likely to switch to part time work by 1.41 percentage points, and all other races are also less likely to switch to part time work. Compared to those who did not complete high school, those who did complete high school are less likely to switch to part time work by 6.78 percentage points and those who completed some college or a 2-year college are 7.35 percentage points less likely to switch to part time work. Citizens of the United States are more likely to switch to part time work than non-citizens and the unemployment rate rising by 1 percent will cause people to switch to part time work.

As shown in Column 4, ACA Medicaid expansion decreases the likelihood of retirement among these people by 0.267 percentage points. Individuals from treatment states are more likely to be retired than those from control states and respondents are 4.52 percentage points less likely to retire after 2014. Females are 3.45 percentage points more likely to retire than males, and married individuals are more likely to retire than single people. The older a person is by 1 year, the likelihood of them retiring increases by 4.51 percentage points. Compared to white people, African Americans are 2.25 percentage points more likely to retire, and all other races are more likely to retire as well. Compared to those who did not complete high school, those who did complete high school are less likely to retire by 1.19 percentage points and those who completed some college or a 2-year college are 3.26 percentage points less likely to retire. Citizens of the United States are more likely to be retired by 6.06 percentage compared to non-citizens.

Table 4 shows the results for a regression that includes the interaction between a female and being married. Being a married female significantly decreases the likelihood of being

employed by 19.2 percentage points, increases the likelihood of being retired by 8.25 percentage points, increases the likelihood of switching to part time work by 12.9 percentage points, and decreases the likelihood of labor force participation by 18.3 percentage points, compared to the unmarried female. This shows that being a married female significantly decreases any likelihood of fulltime employment, having these individuals more likely to retire or switch to part time work because of their increased coverage through Medicaid. This interaction variable is important because the married and unmarried females will have very different decisions to make about their employment and retirement depending on whether they are covered by Medicaid.

Chapter 7. Discussion

The results I find are not similar to those from recent literature. For example, Ayyagari (2017) found that the average retirement age would lower, but I found no significant change in retirement due to the ACA Medicaid expansion. My results are contradictory to Ayyagari's as I find that people are more likely to be employed due to the ACA expansion of Medicaid rather than retired. Shoven and Slavov (2014) used IRS data to show that when someone has employer health insurance, they have an incentive to retire or switch to part time work and will do so. My results are not consistent with these findings as the likelihood of someone switching to part time work is decreased and the likelihood of someone retiring has not changed. Using CPS data only from Tennessee, Garthwaite et al (2014) determined that public health insurance eligibility will affect labor supply because with free or discounted public health insurance, childless adults are more likely to exit the labor force. My results do not confirm this as the ACA Medicaid expansion has no effect on retirement and increases the likelihood of an individual being in the labor force and employed.

The results of this paper are similar to the results of Levy et al (2015)'s study, who also uses CPS data and finds that there was no increase in shifts to part time work or retirement due to ACA Medicaid expansion. The only difference is that my results show that people will be less likely to switch to part time work due to the ACA Medicaid expansion. Uccello (1998) uses SIPP and HRS data and finds that unmarried individuals are less likely to retire early because they have lower wealth than married individuals or unmarried individuals that continue working. In Table 4, the interaction of female and married variable shows that married females are more likely to retire early than unmarried females which is consistent with Uccello's findings. The findings of Gustman, Steunmeier, and Tabatabai (2016) with HRS data are consistent with my results as they find that

with Medicaid expansion, people are healthier and can actually work longer, instead of retiring early. This paper concurs, as there is no effect on retirement and people are more likely to be employed and in the labor force, and less likely to switch to part time work. Discussing the expansion of Medicaid, Frisvold and Jung (2016) use CPS data to find that Medicaid expansion through ACA will not affect the labor markets and will significantly increase coverage. This holds true with my findings as there was no significant effect on retirement and people were more likely to be employed because they were healthy enough to work due to the increased coverage.

Chapter 8. Conclusion

The analysis of this paper shows that because of the Medicaid expansion of the Affordable Care Act, low educated people, aged 55-64, are more likely to be employed and participate in the labor force. They are also less likely to switch to part time work and less likely to be retired. The results do not change dramatically when the interaction between married and female is introduced. The findings are similar to Levy et al (2015) in that there is no evidence that the ACA Medicaid expansion has a positive effect on retirement, however Levy et al (2015) found that there was no effect on older people switching to part time work and my findings were that older people were less likely to switch to part time work than before.

Since Medicaid has been expanded through ACA, people are more likely to be employed and be a part of the labor force due to the increased benefits that these people receive. By covering more people, the population is healthier than before and able to work for longer. These low educated people aged 55-64 are healthier than before and do not have to stop working or switch to part time because of health issues. With people working longer, the US economy will be flourishing as it has been of recent.

This paper's data is limited by being yearly data instead of monthly which could skew some of the data. For example, if someone leaves work in April, because the yearly survey is taken in March, they would not be recorded as retired until the following March. 11 states were dropped from the sample because of their varying times of expanding Medicaid. This was to focus on a single event that could be used as the before and after point of the difference-in-difference method. By dropping these states, we could have biased results since the sample is not nationally representative.

This study can be expanded in the future as it only contains data from 2005 to 2017, having only 2014, 2015, 2016, and 2017 as the years to be measured that Medicaid has been expanded. As time goes on, more effects may appear to be evident but the sample is a small amount of time to measure the effects. A future study can also include all 50 states and Washington D.C. to get a more representative result with all the United States being included. The policy implications that can be gathered from the results is that Medicaid could be expanded even further to cover a higher percentage of the population. With more people covered by health insurance, the nation as a whole would be healthier and more productive.

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Appendix A

Table 1

State Medicaid Expansion Status as of January 1, 2017

Expanded Between March 2010 and Dec. 2013(4)	Expanded Jan. 2014 (21)	Expanded Between Jan. 2014 and December 31, 2016 (7)	No Expansion as of January 1, 2017 (19)
California Connecticut Washington D.C. Minnesota	Arizona Arkansas Colorado Delaware Hawaii Illinois Iowa Kentucky Maryland Massachusetts Nevada New Jersey* New Mexico New York North Dakota Ohio Oregon Rhode Island Vermont Washington* West Virginia	Michigan (April 1, 2014) New Hampshire (August 15, 2014) Pennsylvania (January 1, 2015) Indiana (February 1, 2015) Alaska (September 1, 2015) Montana (January 1, 2016) Louisiana (July 1, 2016)	Alabama Florida Georgia Idaho Kansas Maine Mississippi Missouri Nebraska North Carolina Oklahoma South Carolina South Dakota Tennessee Texas Utah Virginia Wisconsin Wyoming

Sources: Kaiser Family Foundation website: <https://www.kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/?currentTimeframe=0&selectedDistributions=current-status-of-medicaid-expansion-decision&sortModel=%7B%22colId%22:%22Current%20Status%20of%20Medicaid%20Expansion%20Decision%22,%22sort%22:%22asc%22%7D> ; Levy et al (2015)

* Although New Jersey and Washington State also adopted early Medicaid expansion under the ACA, their early expansions were limited and involved primarily or exclusively shifting individuals who had previously been enrolled in state-financed programs onto Medicaid (Sommers et al., 2014). Full expansion of Medicaid eligibility to all individuals below 138 percent of poverty did not occur until 2014. Therefore, we code them as having expanded Medicaid in January 2014.

Table 2**Panel A. Descriptive Statistics of Independent Variables**

	Treatment States		Control States	
Variable	Mean	Std. Dev.	Mean	Std. Dev.
female	0.5341677	0.4988352	0.5318197	0.4989905
married	0.6834999	0.4651143	0.6931142	0.4612053
age	59.16298	2.866285	59.17259	2.867254
black	0.1084053	0.3108941	0.1599981	0.3666072
other_race	0.1108632	0.3139652	0.0498647	0.2176671
highschool	0.460965	0.498478	0.446092	0.4970895
somecollege	0.4036739	0.4906375	0.4129515	0.4923682
citizen	0.9352382	0.2461071	0.9454681	0.2270661
insurance	0.8667249	0.3398746	0.82929	0.3762584
Unemployment rate	6.209426	2.17283	6.047795	2.171443
Observations	61,842		61,707	

Panel B. Descriptive Statistics of Dependent Variables

	Control States			Treatment States		
Variable	Observations	Mean	Std. Dev.	Observations	Mean	Std. Dev.
employed	61,707	0.6757742	0.4680886	61,842	0.6656641	0.4717616
LFP	61,707	0.7109404	0.4533293	61,842	0.7056369	0.4557596
parttime	37,797	0.2223192	0.41581	37,568	0.2484828	0.4321389
retired	61,707	0.2050659	0.403753	61,842	0.2107467	0.4078422

TABLE 3 Regression Baseline Results

VARIABLES	(1) employed	(2) LFP	(3) parttime	(4) retired
Treat*after	0.0126** (0.00607)	0.0137** (0.00581)	-0.0227*** (0.00696)	-0.00267 (0.00515)
treat	-0.0869*** (0.0136)	-0.0805*** (0.0130)	0.0375** (0.0165)	0.0564*** (0.0115)
after	0.0328*** (0.00735)	0.0306*** (0.00704)	0.00478 (0.00856)	-0.0452*** (0.00624)
female	-0.102*** (0.00258)	-0.120*** (0.00247)	0.197*** (0.00303)	0.0345*** (0.00219)
married	-0.0168*** (0.00282)	-0.0381*** (0.00270)	0.00156 (0.00329)	0.0176*** (0.00239)
age	-0.0373*** (0.000448)	-0.0401*** (0.000429)	0.0141*** (0.000546)	0.0451*** (0.000380)
black	-0.0334*** (0.00404)	-0.0230*** (0.00387)	-0.0141*** (0.00476)	0.0225*** (0.00343)
other_race	-0.0204*** (0.00537)	-0.0203*** (0.00514)	-0.0207*** (0.00634)	0.00706 (0.00455)
highschool	0.0828*** (0.00411)	0.0742*** (0.00393)	-0.0678*** (0.00511)	-0.0119*** (0.00348)
somecollege	0.120*** (0.00419)	0.110*** (0.00402)	-0.0735*** (0.00518)	-0.0326*** (0.00356)
citizenship	0.0164*** (0.00575)	0.00343 (0.00551)	0.000552 (0.00689)	0.0606*** (0.00488)
Unemployment	-0.00442*** (0.00167)	0.00195 (0.00160)	0.00554*** (0.00195)	-0.00362** (0.00141)
Constant	2.843*** (0.0307)	3.032*** (0.0294)	-0.697*** (0.0369)	-2.472*** (0.0260)
Observations	123,549	123,549	75,365	123,549
R-squared	0.083	0.100	0.071	0.115

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

TABLE 4 Regression Results Controlling for the Interaction of Married Females

VARIABLES	(1) employed	(2) LFP	(3) parttime	(4) retired
Treat*after	0.0112* (0.00604)	0.0123** (0.00578)	-0.0221*** (0.00695)	-0.00207 (0.00514)
treat	-0.0835*** (0.0135)	-0.0772*** (0.0129)	0.0357** (0.0164)	0.0549*** (0.0115)
after	0.0367*** (0.00732)	0.0343*** (0.00701)	0.00174 (0.00854)	-0.0469*** (0.00623)
female	0.0316*** (0.00467)	0.00811* (0.00448)	0.107*** (0.00548)	-0.0231*** (0.00398)
married	0.0919*** (0.00424)	0.0660*** (0.00406)	-0.0710*** (0.00494)	-0.0292*** (0.00361)
Female*married	-0.192*** (0.00559)	-0.183*** (0.00536)	0.129*** (0.00656)	0.0825*** (0.00476)
age	-0.0377*** (0.000446)	-0.0404*** (0.000427)	0.0145*** (0.000545)	0.0453*** (0.000379)
black	-0.0384*** (0.00402)	-0.0277*** (0.00385)	-0.0113** (0.00475)	0.0246*** (0.00343)
other_race	-0.0221*** (0.00534)	-0.0219*** (0.00512)	-0.0201*** (0.00632)	0.00777* (0.00455)
highschool	0.0834*** (0.00409)	0.0748*** (0.00392)	-0.0686*** (0.00510)	-0.0121*** (0.00348)
somecollege	0.118*** (0.00418)	0.109*** (0.00400)	-0.0733*** (0.00516)	-0.0320*** (0.00355)
citizenship	0.0183*** (0.00572)	0.00534 (0.00548)	-0.000420 (0.00688)	0.0597*** (0.00487)
Unemployment	-0.00421** (0.00166)	0.00215 (0.00159)	0.00543*** (0.00194)	-0.00370*** (0.00141)
Constant	2.780*** (0.0306)	2.971*** (0.0293)	-0.660*** (0.0369)	-2.445*** (0.0261)
Observations	123,549	123,549	75,365	123,549
R-squared	0.091	0.109	0.075	0.117

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1